

## CLAIM AMENDMENTS

1. **(Original)** A method for detecting and classifying a structure of interest in a three-dimensional medical image, comprising the steps of: (a) defining one or more image planes  
5 in a subvolume in said three-dimensional medical image; (b) determining edge displacement fields for a plurality of slices in each of said defined image plane, wherein said plurality of slices are defined over the axis perpendicular to said corresponding image plane; (c) combining said determined edge displacement fields for each of said defined image plane; (d) determining parameters based on said combined edge displacement field; and (e)  
10 classifying said structure of interest based on said determined parameters.

2. **(Original)** The method as set forth in claim 1, wherein at least two of said defined image planes are mutually orthogonal image planes.

15 3. **(Original)** The method as set forth in claim 1, wherein said step of classifying is based on a combination of said parameters determined from two or more of said defined image planes.

4. **(Original)** The method as set forth in claim 1, wherein the step of classifying further  
20 comprises the step of distinguishing a polyp from a non-polyp.

5. **(Original)** The method as set forth in claim 1, wherein said subvolume is selected by a pre-detection of said structure of interest.

6. **(Original)** The method as set forth in claim 1, wherein said three-dimensional medical image comprises a three-dimensional segmented computed tomography image.

7-10. **(Canceled)**

5

11. **(Currently Amended)** A program storage device having a computer readable medium accessible by a computer, tangible embodying a program of instructions on said computer readable medium and executable by said computer to perform method steps for detecting and classifying a structure of interest in a three-dimensional medical image, comprising: (a)  
10 means for defining one or more image planes in a subvolume in said three-dimensional medical image; (b) means for determining edge displacement fields for a plurality of slices in each of said defined image plane, wherein said plurality of slices are defined over the axis perpendicular to said corresponding image plane; (c) means for combining said determined edge displacement fields for each of said defined image plane; (d) means for determining  
15 parameters based on said combined edge displacement field; and (e) means for classifying said structure of interest based on said determined parameters.

12. **(Original)** The program storage device as set forth in claim 11, wherein at least two of said defined image planes are mutually orthogonal image planes.

20

13. **(Original)** The program storage device as set forth in claim 11, wherein said means for classifying is based on a combination of said parameters determined from two or more of said defined image planes.

14. **(Original)** The program storage device as set forth in claim 11, wherein said means for classifying further comprises means for distinguishing a polyp from a non-polyp.

5 15. **(Original)** The program storage device as set forth in claim 11, wherein said subvolume is selected by a pre-detection of said structure of interest.

16. **(Original)** The program storage device as set forth in claim 11, wherein said three-dimensional medical image comprises a three-dimensional segmented computed  
10 tomography image.